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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,706	09/17/2003	Irving N. Weinberg	215535.00045	3965

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PATENT ADMINISTRATOR
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EXAMINER	
BITAR, NANCY	
ART UNIT	**PAPER NUMBER**
2624	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/663,706	WEINBERG, IRVING N.	
	Examiner	Art Unit	
	Nancy Bitar	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *31-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/23/2004*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election / Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-30 drawn to a determining a biopsy location in a body part classified in class 382, subclass 128.

II. Claims 31-33, drawn to coupling a non-networked device to a computer network in class 711, subclass 154.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as coupling a non-network device to a computer network to display an image as required by subcombination I. See M.P.E.P. § 806.05(d).

3. During a telephone conversation with James Gromada on 12/8/2006 a provisional election was made with traverse to prosecute the invention of determining biopsy location in a body part, claim 1-30. Affirmation of this election

must be made by applicant in replying to this Office action. Claims 31-33 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 C.F.R. § 1.104. See M.P.E.P. § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable

In the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction were not required because the inventions require a different field of search (see M.P.E.P. § 808.02), restriction for examination purposes as indicated is proper.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Wainer et al. (US 5,871,013).

As to claim 1, Wainer et al teaches the system a system for determining a biopsy location in a body part, the system comprising:

a first device configured to obtain first data about a physiology of the body part, the first data being representable as a digital image(detector 22 is preferably an anger type camera, figure 6, column 8, lines 60-68, SPTCT image);

a second device configured to obtain second data about the body part, the second data being represent able as an image(radiation source, figure 6, STET image ; note that figure 2B are STET images of the region shown in figure 1and shows functionality active area 2 in image 6, but figure 2A shows a very simplified SPTCT image which is structural image, column 7, lines 15-24)

a monitor coupled to the second device and configured to display the image corresponding to the second data (display 29, figure 6);

a signal processing module coupled to the second device, the signal-processing module including an analog-to-digital converter configured to digitize the second data(signal processor, 26, figure 6);

a memory coupled to the signal processing module and to the first device, the memory being configured to store the first data and the digitized second data (memory 28, figure 6);

and a computer coupled to the memory (image is calculated and displayed automatically by the computer, column 7, lines 47-49) and configured to correlate the first data with the digitized second data and to provide a result of the correlation to a user (correlating the two images, column 7, lines 10-25; the correlation algorithm used for matching images and slices, column 7, lines 50-67 and column 8, lines 1-31) .

As to claim 2, Wainer et al teaches the system of claim 1, wherein the computer is further configured to use the result of the correlation to produce a combined image (figure 4B shows the super positioning of the outline of the active area from the STET image 6 on the CT image 70, column 7, lines 32-41).

As to claim 3, Wainer et al teaches the system of claim 2, wherein a determination of a biopsy location is made on the basis of the combined image

(processor 26 determines the location and energy of photons striking detectors 22, column 9, lines 1-3).

As to claim 4, Wainer et al teaches the system of claim 1, further comprising a localization device coupled to the second device, the localization device being configured to enable a selection of a preferred subset of the second data based on the digital image corresponding to the first data (position sensor, column 9, lines 7-20, note that the images are transformed into multisliced image).

As to claim 5, Wainer et al teaches the system of claim 1, wherein the localization device comprises a computer mouse (note that STET image is under control through the computer therefore it is clear that the location can be pointed by a computer mouse, column 9, lines 20-23).

As to claim 6, Wainer et al teaches the system of claim 1, wherein the system is configured to use a predetermined spatial coordinate system, and wherein the computer includes a transformer configured to transform at least one of the first data and the digitized second data into the predetermined spatial coordinate system (spatial parameters matching, column 8, lines 9-16).

As to claim 7, Wainer et al teaches the system of claim 1, wherein the second device comprises one of the group consisting of a digital x-ray machine, an x-ray mammography machine, an x-ray cranial axial tomography machine, a magnetic resonance imaging machine, and an ultrasound machine(a method of

registering a STET and a structural diagnostic image (such as MRI, ultrasound or X-ray CT image, column 2, lines 39-43).

As to claim 8, Wainer et al teaches the system of claim 1, wherein the first device comprises a positron emission tomography scanner machine (a SPTCT is a single photon transmission computerized tomography, column 1, lines 38-40).

Claims 9-17 differ from claim 1-8 only in that claims 9-17 are a method claim whereas, claims 1-8 are a system claim. Thus, claims 9-17 are analyzed as previously discussed with respect to claims 1-8 above.

Claims 18-20 differs from claim 9-17 only in that claim 9-17 are a method claim whereas; claims 18-20 are an apparatus claim. Thus, claims 18-20 are analyzed as previously discussed with respect to claims 9-17 above.

As to claim 21 refer to claim 1 above.

The limitation of claim 22, has been addressed above except for the following" superimpose the extracted information from the digitized second data onto the digital image corresponding to the first data to produce a combined image". Wainer et al. teaches that limitation in column 4, lines 42-47.

As to claim 23, Wainer et al teaches the system of claim 22, wherein a determination of a biopsy location is made on the basis of the combined image (the output of detector 22 is processed by a signal processor 26, processor 26 determines location and energy of photons striking detector 22 and the output of signal processor 26 is further processed by image processor 27 to provide image

data using a memory 28.the processed image are shown on display 29, column 9, lines 1-6).

As to claim 24, Wainer et al teaches the system of claim 21, wherein the first data obtained by the first device includes data about a physiology of the body part (the STET image shows the functional activity of the body tissue, not its structural detail, column 2, lines 1-2).

As to claim 25, Wainer et al teaches the system of claim 21, wherein the second data obtained by the second device includes anatomical data about the body part (SPTCT data in order to identify structure in the patient's body, column 2, lines 39-53).

As to claim 26, Wainer et al teaches the system of claim 21, further comprising: a monitor coupled to the second device and configured to display the image corresponding to the second data (display 29) ; and a localization device (position sensor 31) coupled to the second device and configured to enable selection of a preferred subset of the second data based on the digital image corresponding to the first data (position sensor, column 9, lines 7-20, note that the images are transformed into multisliced image where the correlation happened between the STET images and the CT images)).

As to claim 27, Wainer et al teaches the system of claim 26, wherein the localization device comprises a computer mouse (note that STET image is under control through the computer therefore it is clear that the location can be pointed by a computer mouse, column 9, lines 20-23).

As to claim 28, Wainer et al teaches the system of claim 21, wherein the system is configured to use a predetermined spatial coordinate system, and wherein the computer includes a transformer configured to transform at least one of the first data and the digitized second data into the predetermined spatial coordinate system (spatial parameter matching, column 8, lines 10-16, note that the operator can cooperator can choose the appropriate slices based on her understanding of the images and her knowledge of human anatomy, column 6, lines 62-64).

As to claim 29, Wainer et al teaches the system of claim 21, wherein the second device comprises one of the group consisting of a digital x-ray machine, an x-ray mammography machine, an x-ray cranial axial tomography machine, a magnetic resonance imaging machine, and an ultrasound machine (column 2, lines 39-42).

As to claim 30, Wainer et al teaches the system of claim 21, wherein the first device comprises a positron emission tomography scanner machine (column 1, lines 38-40).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Roesch et al(US 6,950,542) Is cited to teach the transformation of two different images of an object one into the other while describing the motion or deformation of the object.

Boland et al (US 6,868,172) Is cited to teach image registration for x-ray imagery to provide tie point selection accuracy and efficiency.

Darrow et al (US 2004/0034297) Is cited to teach medical device positioning system and method for use during a medical procedure on a subject performed during imaging are provided. The system comprises a medical device adapted for internal use within the subject for performing the medical procedure and an imaging device for acquiring image data of a region of interest within the subject

Inquiries

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nancy Bitar whose telephone number is 571-270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 571-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar 12/14/2006

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EXAMINER